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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
VUONG, QUOCHIEN B	
ART UNIT	**PAPER NUMBER**
2685	

DATE MAILED: 01/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/784,613	TSIVIDIS, YANNIS	
	Examiner	Art Unit	
	Quochien B Vuong	2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 July 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *07/02/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 07/02/2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 17, 23-25, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark (US 5,001,776) in view of Okanobu (US 5,020,147).

Regarding claims 1 and 23, Clark (figure 1) discloses a wireless transceiver circuit and a method of receiving a signal using a circuit, the circuit comprising a signal path including a low-noise amplifier (108) configured to receive the signal, a mixer (110) having an input coupled to an output of the low-noise amplifier, and a low-pass filter (120) having an input coupled to an output of the mixer, the method comprising: determining a first signal strength (126) at a first node in the signal path in the circuit; and dynamically changing a peak-to-peak voltage and current consumption of component (mixer 110) in the signal path based on the first signal strength (column 2, line 34 – column 4, line 66). Clark does not specifically disclose the circuit is an

integrated circuit, and dynamically changing an impedance of the component in the signal path. However, since Clark disclose dynamically changing the peak-to-peak voltage and current consumption of component in the signal path based on the first signal strength, therefore, it would be obvious for the transceiver and method of Clark to dynamically change the impedance of the component as well in order to reduce signal interference or distortion. In addition, Okanobu discloses a circuit formed on an integrated circuit (see figure 1, column 7, lines 30-32). Therefore, it would have been obvious for one having ordinary skill in the art at the time the invention was made to adapt the teaching of Okanobu to the transceiver and method of Clark in order to reduce the size of the circuit for compact design.

Regarding claims 17 and 29, Clark (figure 1) discloses a wireless transceiver circuit and a method of receiving a signal using a circuit, the circuit comprising a signal path including a first circuit (including 104, 108) and a second circuit (the rest of the transceiver in figure 1) having an input coupled to an output of the first circuit, the method comprising: determining a first signal strength (126) at a first node in the signal path in the circuit, wherein the first node is before the first circuit in the signal path; and dynamically changing a gain of the first circuit (108) based on the first signal strength (column 4, lines 30-43) (column 2, line 34 – column 4, line 66). Clark does not specifically disclose the circuit is an integrated circuit, and dynamically changing an impedance of the second circuit. However, since Clark disclose dynamically changing the peak-to-peak voltage and current consumption of the second circuit based on the first signal strength (column 3, line 58 – column 4, line 3), therefore, it would be obvious

for the transceiver and method of Clark to dynamically change the impedance of the second circuit as well in order to reduce signal interference or distortion. In addition, Okanobu discloses a circuit formed on an integrated circuit (see figure 1, column 7, lines 30-32). Therefore, it would have been obvious for one having ordinary skill in the art at the time the invention was made to adapt the teaching of Okanobu to the transceiver and method of Clark in order to reduce the size of the circuit for compact design.

As to claims 24 and 25, Clark discloses a second signal strength indicator circuit (126') coupled to the output of the mixer (110) or low-pass filter (120), and configured to determined s second signal strength, wherein the impedance in the signals path is configured to be adjusted in response to the first and second signal strength (column 3, lines 6-49).

4. Claims 2-16, 18-22, and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark (US 5,001,776) in view of Okanobu (US 5,020,147) and further in view of Smith et al. (US 6,714,557).

Regarding claim 2, the combination of Clark and Okanobu does not disclose the signal comprises a preamble portion and a data portion, the impedance of a component is changed while receiving the preamble portion, and the method further comprises receiving the data portion of the signal. However, Smith et al. (figure 1) disclose a signal comprising a preamble portion (112) and a data portion (114, 204, 206) (column 5, lines 29-45). Therefore, it would have been obvious to adapt the signal of Smith et al. to the

method of Clark and Okanobu to adjust the setting of the component during receiving the preample portion in order to properly receive the data portion.

As to claims 3 and 4, Clark (figure 1) discloses determining a second signal strength (126') at a second node in the signal path, wherein the second node in the signal path is after the first node, wherein the impedance of the component in the signal path is also changed based on the second signal strength (column 3, lines 6-49).

As to claims 5-9, Clark discloses the component in the signal path is included in the mixer (110), and it would be obvious for the component in the signal path to comprise a MOS transistor, resistor, capacitor, or a low-pass filter, since these components are well known in the transceiver circuit.

Regarding claims 10 and 26, Clark (figure 1) discloses a wireless transceiver circuit and a method of receiving a signal using a circuit, the circuit comprising a signal path including a low-noise amplifier (108) configured to receive the signal, a mixer (110) having an input coupled to an output of the low-noise amplifier, and a low-pass filter (120) having an input coupled to an output of the mixer, the method comprising: determining a first signal strength (126) at a first node in the signal path in the circuit; and dynamically changing a peak-to-peak voltage and current consumption in the signal path based on the first signal strength (column 2, line 34 – column 4, line 66). Clark does not specifically disclose the circuit is an integrated circuit; dynamically changing a bias current in the signal path while receiving a preample portion of the signal. However, since Clark disclose dynamically changing the peak-to-peak voltage and current consumption of component in the signal path based on the first signal strength,

therefore, it would be obvious for the transceiver and method of Clark to dynamically change the bias current as well in order to reduce signal interference or distortion. In addition, Okanobu discloses a circuit formed on an integrated circuit (see figure 1, column 7, lines 30-32). Therefore, it would have been obvious for one having ordinary skill in the art at the time the invention was made to adapt the teaching of Okanobu to the transceiver and method of Clark in order to reduce the size of the circuit for compact design. The combination of Clark and Okanobu does not disclose the signal comprises a preamble portion and a data portion, the impedance of a component is changed while receiving the preamble portion, and the method further comprises receiving the data portion of the signal. However, Smith et al. (figure 1) disclose a signal comprising a preamble portion (112) and a data portion (114, 204, 206) (column 5, lines 29-45). Therefore, it would have been obvious to adapt the signal of Smith et al. to the method of Clark and Okanobu to adjust the setting of the component during receiving the preample portion in order to properly receive the data portion.

As to claim 11, Smith et al. disclose the method further comprises receiving the data portion of the signal (column 5, lines 29-45).

As to claims 12 and 13, Clark (figure 1) discloses determining a second signal strength (126') at a second node in the signal path, wherein the second node in the signal path is after the first node, wherein the bias current in the signal path is also changed based on the second signal strength (column 3, lines 6-49).

As to claims 14-16, Clark discloses the component in the signal path is included in the mixer (110), and it would be obvious for the component in the signal path to

comprise a low-noise amplifier or a low-pass filter, since these components are well known in the transceiver circuit.

As to claim 18, the combination of Clark and Okanobu does not disclose the signal comprises a preamble portion and a data portion, the impedance of a component is changed while receiving the preamble portion, and the method further comprises receiving the data portion of the signal. However, Smith et al. (figure 1) disclose a signal comprising a preamble portion (112) and a data portion (114, 204, 206) (column 5, lines 29-45). Therefore, it would have been obvious to adapt the signal of Smith et al. to the method of Clark and Okanobu to adjust the setting of the component during receiving the preample portion in order to properly receive the data portion.

As to claims 19 and 20, Clark (figure 1) discloses determining a second signal strength (126') at a second node in the signal path, wherein the second node in the signal path is after the first node, wherein the impedance of the component in the signal path is also changed based on the second signal strength (column 3, lines 6-49).

As to claims 27 and 28, Clark discloses a second signal strength indicator circuit (126') coupled to the output of the mixer (110) or low-pass filter (120), and configured to determined s second signal strength, wherein the impedance in the signals path is configured to be adjusted in response to the first and second signal strength (column 3, lines 6-49).

5. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clark (US 5,001,776) in view of Okanobu (US 5,020,147) and further in view of Park (US 5,995,853).

Regarding claim 30, Clark further discloses the transceiver comprising a transmitter (figure 1, transmitter 144). The combination of Clark and Okanobu does not disclose the transmitter comprising a power amplifier and an output-level-sensing circuit coupled to an output of the power amplifier, wherein the output-level-sensing circuit is configured to dynamically adjust a gain of the power amplifier. However, Park (figure 1) discloses a transmitter (100) comprising a power amplifier (160) and an output-level-sensing circuit (124) coupled to an output of the power amplifier, wherein the output-level-sensing circuit is configured to dynamically adjust a gain of the power amplifier (column 3, line 60 – column 4, line 28). Therefore it would have been obvious for one having ordinary skill in the art at the time the invention was made to adapt the teaching of Park to the combination of Clark and Okanobu in order to control the transmission power.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Snider et al. (US 5,867,063) disclose a gain distribution circuit.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quochien B Vuong whose telephone number is (703) 306-4530. The examiner can normally be reached on M-F 9:30-18:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (703) 305-4385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Quochien B Vuong

QUOCHIEN B. VUONG
PRIMARY EXAMINER

Quochien B. Vuong
Dec. 23, 2004.